



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/020,331

12/12/2001

Michael T. Milbocker

PRAXIS-5

9980

21127

7590

06/08/2010

RISSMAN HENDRICKS & OLIVERIO, LLP

100 Cambridge Street

Suite 2101

BOSTON, MA 02114

EXAMINER

FUBARA, BLESSING M

ART UNIT

PAPER NUMBER

1618

NOTIFICATION DATE

DELIVERY MODE

06/08/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mbien-aime@rhoiplaw.com

cjoseph@rhoiplaw.com

info@rhoiplaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/020,331	<b>Applicant(s)</b> MILBOCKER, MICHAEL T.	
	<b>Examiner</b> BLESSING M. FUBARA	<b>Art Unit</b> 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,7-11 and 51-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-11 and 51-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. The examiner acknowledges receipt of request for extension of time and Notice of Appeal filed 10/05/2009; request for extension of time, request for continued examination under 37 CFR 1.114, request for reconsideration and remarks filed 05/04/2010. No claim is amended. Claims 49 and 50 are canceled. Claims 1, 7-11 and 51-53 are pending.

### ***Response to Arguments***

**2. Previous rejections that are not reiterated herein are withdrawn.**

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7-11 and 51-53 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wood (US 4,241,537).

5. Claim 1 incorporates the limitations of claims 2 (for trifunctional polyol), 6 (polyisocyanate is selected from toluene diisocyanate and isophorone diisocyanate), and claim 10. Claim 1 also recites molecular weight of the alkylene oxide polymers. Part of the limitation of claim 9 is recaptured in new claim 53.

Art Unit: 1618

6. Wood discloses a composition comprising isocyanate terminated polyurethane prepolymer (abstract; column 2, lines 61-65) that comprises at least three functional groups (column 5, lines 37-40); the mixture forms a gel (column 5, lines 10 and 11); the polymer contains ethylene oxide (EO) units and propylene oxide (PO) units with specific requirement that the PO unit be present at less than 50% (column 6, lines 37-39); preferably the hydrophobic PO is at about 30% and the EO is greater than about 70% preferably (column 7, lines 27, 28, 35-37); the isocyanates are present as toluene-2,4-diisocyanate and toluene-2,6-diisocyanate at a ratio of 80:20 (column 8, lines 15, 16; column 10, lines 57 and 58); isophorone diisocyanate is also present or employed (column 8, line 56); the polymer formed between PO and EO in the presence of the isocyanates is block, random or both (column 7, line 15). The ratio of the EO to PO, the number of functionalities of at least 3 as stated above, the amount of water which is present at 50-95% (column 3, lines 39-41) meet the limitations of claims 1 and 51. Toluene-2,6-diisocyanate meets claims 7, 11; isophorone diisocyanate meets claims 8, 10 and 11; isocyanates present as toluene-2,4-diisocyanate and toluene-2,6-diisocyanate at a ratio of 80:20 as described above meet claim 9. The concentration of the isocyanate is low (column 6, lines 6-14) resulting in minimal free isocyanate. Wood contemplates copolymerizing EO with PO in the presence of polyols such as trimethylolpropane (column 7, lines 55-58). The silence of Wood on the presence of free isocyanate in the composition indicates composition that is free of the NCO or minimal amount present since the starting amount is low at 2 meq/g and claim 53 is thus met. Wood does not add catalyst to the composition so that the presence of low molecular weight polyisocyanate meets claim 52 since the functionality is at least 3. Wood teaches that the number average molecular weight of the pre-polymer is at least 3000 (column 5, lines 51-53),

Art Unit: 1618

which intersects points within the recited range meeting the molecular weight requirement.

Therefore, Wood anticipates the claims. In the alternate, the silence of Wood on the presence of free isocyanate in the composition indicates the composition is free of NCO or is present in minimal amounts. Therefore, taking the general teaching of the reference, it would be prima facie obvious that the amount of the isocyanate remaining is very minimal.

***Response to Arguments***

7. Applicant's arguments filed 05/04/2010 have been fully considered but they are not persuasive.

8. Applicant refers to claims 1-3 and 8 as being rejected. However, claims 2 and 3 are canceled

9. Applicant argues that the product formed in Wood contain ether linkages and not urethane linkages.

10. Response: The examiner disagrees because the goal of Wood is to form polyurethane hydrogel (see the title; column 2, lines 61-65). Furthermore the structure in column 6, lines 45-60 contains urethane linkages and not ether linkages. The instant claim is a broad copolymer polyol that is formed from "a reaction between a polyethylene/polypropylene oxide diol of between 800 and 5,000 MW, trimethylolpropane, and the low molecular weight polyisocyanate, and wherein at least 1% of said composition by weight, but not more than 5% of said composition by weight, comprises the low molecular weight polyisocyanate as a free polyisocyanate; and wherein on average in the composition, 10% to 30% of the monomers of said block copolymer polyol are derived from propylene oxide monomers, and the rest of the monomers are ethylene oxide derived monomers; characterized in that after polymerization,

Art Unit: 1618

upon exposure to tissue or water, the adhesive composition forms a hydrogel comprising, after equilibration with water or aqueous fluids, greater than 50% water by volume; and wherein the composition polymerizes in situ upon exposure to water and application to tissue, without requiring the addition of a catalyst.” These are the same components in wood.

11. Applicant has represented a two step process that is not claimed, but the claim does not recite a process that comprises two steps and forms the specific polymer represented on 6 of the remarks. Further, applicant the polymer of Wood has urethane linkages that applicant has not represented.

12. Applicant argues that Wood does not contemplate reaction between polyethylene/polypropylene oxide diol of between 800 and 5,000 MW, trimethylolpropane and low molecular weight polyisocyanate; applicant argues that Wood does not teach reaction between 3 components and that Wood's polymer is a copolyol.

13. Response: The examiner disagrees because, Wood contemplates copolymerizing EO with PO in the presence of polyols such as trimethylolpropane (column 7, lines 55-58); the isocyanates are present as toluene-2,4-diisocyanate and toluene-2,6-diisocyanate at a ratio of 80:20 (column 8, lines 15, 16; column 10, lines 57 and 58); isophorone diisocyanate is also present or employed (column 8, line 56); number average molecular weight of the pre-polymer is at least 3000 (column 5, lines 51-53) and this anticipates the range of 800-5000.

14. Claim 1 is directed to copolymer polyol which is the same as copolyol. The three reactants or components Wood are toluene-2,4-diisocyanate and toluene-2,6-diisocyanate at a ratio of 80:20 which are low molecular weight isocyanate, EO/PO and polyols such as trimethylolpropane; these are the same components in the claims.

Art Unit: 1618

15. The examiner has reconsidered the claims, the art and applicant's arguments and finds the claims anticipated or in the alternate rendered obvious by Wood.

16. No claim is allowed.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLESSING M. FUBARA whose telephone number is (571)272-0594. The examiner can normally be reached on Monday to Thursday from 7 a.m. to 5:30 p.m.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Blessing M. Fubara/  
Primary Examiner, Art Unit 1618